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Remarks

Claims 1 – 24 are pending. Claims 1 – 12 have been rejected. Claims 13 – 24 are withdrawn from consideration.

Claim 1 – 10 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Wang (5,293,025) in view of Nagasaka (5,562,973) and further in view of Higson (6,083,366). Claim 1 is reproduced below:

1. (Original) A method of making a sensor to measure an analyte in a solution, the method comprising:
 - providing a substrate;
 - printing conductive ink on the substrate to form a plurality of electrode regions;
 - depositing an electrical insulation to cover one of the electrode regions;
 - sonically ablating the electrical insulation to form an array of pores through the electrical insulation to the conductive ink in the one electrode region; and
 - depositing metal into the pores to form an array of electrodes in the one electrode region.

Claim 1 requires that metal is deposited into the pores to form an array of electrodes in the one electrode region. Higson does not use metal. Higson clearly states that a conducting organic polymer is deposited into the pores (see column 2 lines 15 – 20). The current application identifies the prior art of using a conducting organic polymer in the background section on page 2, lines 14 – 19. The advantage of using metal instead of conducting organic polymers is that “The metal in the pores provides better sensitivity than a conducting organic polymer for some applications, such as chlorine detection” (see page 7, lines 5 – 6 of the current application).

Neither Wang, nor Nagasaka, deposit metal into pores to form an array of electrodes. An electrode is defined as a conductor (as a metallic substance or carbon) used to establish electrical contact with a nonmetallic portion of a circuit. *Webster's Third New International Dictionary, Unabridged*. Merriam-Webster, 2002. (emphases added). Wang is directed to a method for rapidly forming a pattern of vias in a PC board (see abstract). Vias are well known in the arts as a plated or filled hole used to establish electrical connection between conductors on different board layers. This is clearly shown in figure

3 where the first conducting layer (a) is connected to the second conducting layer (j) with the filled via holes. The vias in Wang form an electrical connection between two conducting layers in the electronic circuit. The filled holes in Wang are not electrodes. The holes in Wang certainly don't form an array of electrodes. Therefore Wang is non-analogues art. Nagasaka also fills hole with metal to form an electrical connection between two conductive sections of an electrical circuit (see abstract). The metal in Nagasaka is used to join the two conducting layers together, like soldering two wires together. As discussed above, connecting two metallic sections of a circuit by filling a hole with metal, is completely different than creating an array of electrodes by filling an array of pores with metal.

"To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). There is no suggestion in either Wang or Nagasaka to modify Higson to use metal instead of the conducting organic polymer in Higson. Furthermore the examiner has not presented a convincing line of reasoning as to why someone skilled in the arts would have found the claimed invention to have been obvious in light of the teachings of the references. Therefore the examiner has not established a *prima facie* case for obviousness and claims 1 – 10 are allowable as written.

Claims 11 – 12 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Wang (5,293,025) in view of Higson (US 6,083,366) and in further view of Hall et al. (4,242,379). Claims 11 and 12 are dependent on allowable claim 1, and are therefore allowable.



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